

Application No. 10/848,140

REMARKS

Claims 1-7 are pending. Claims 8-22 were previously withdrawn in the Amendment filed January 6, 2003, in response to the Restriction Requirement of October 2, 2002. By this Amendment, claims 8-22 are canceled and are being pursued in co-pending Divisional Application Serial No. 10/242,022.

Claims 1, 2, and 4-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang (U.S. Patent No. 4,531,044) in view of Baba et al. (U.S. Patent No. 4,284,437). Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang in view of Baba and further in view of Nagase et al. (U.S. Patent No. 6,033,787). These rejections are respectfully traversed.

First, there is no motivation to combine the cited references. Chang is directed to a method of laser soldering electrical lead strands. Baba is directed to a process for preparing a hard tempered aluminum alloy sheet by hot rolling an ingot of aluminum alloy. There is no suggestion, either intrinsically or extrinsically, in either reference that would motivate one skilled in the art to combine the cited references in the manner suggested in the rejection.

Even if the cited references were to be combined as suggested in the Office Action, the cited references would not meet the claims. Claim 1 is directed to a metal-ceramic circuit board wherein "one surface of the ceramic substrate board is bonded directly to the base plate," in cooperation with the other claimed elements. As described in the specification, for example at page 4, lines 5-12, the ceramic substrate board is bonded with the base plate of aluminum or aluminum alloy "in such a manner that the aluminum or aluminum alloy is molten in a mold and cool[ed] . . . by contacting with the ceramics."

None of the cited references teach or suggest this direct bonding, in cooperation with the other elements claimed in claim 1. Referring to FIG. 3, Chang discloses that the

Application No. 10/848,140

"ceramics [15] are *glued* to a supporting aluminum plate 16 which acts as a heat sink."
(Emphasis added.) Chang therefore does not disclose direct bonding.

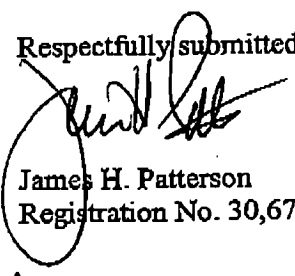
Baba discloses a process for preparing hard tempered aluminum alloy sheet. Nagase teaches a ceramic circuit board with heat sink in which first and second aluminum plates are laminated and bonded onto both sides of a ceramic substrate through Al-Si-based brazing solders (Abstract). Both Baba and Nagase are silent as to one surface of a ceramic substrate board bonded directly to a base plate, as is recited in claim 1 with the other claimed elements.

Therefore, claim 1 is allowable. Claim 7 recites "one surface of the ceramic substrate board is bonded directly to the base plate," in cooperation with the other claimed elements, and is allowable at least for the reasons set forth above with respect to claim 1. Claims 2-6 depend from claim 1 and are therefore also allowable at least for the reasons above. The various rejections to claims 2-7 are traversed but not expressly argued in light of the allowability of the underlying base claim.

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



James H. Patterson
Registration No. 30,673

Customer No. 24113
Patterson, Thuent, Skaar & Christensen, P.A.
4800 IDS Center
80 South 8th Street
Minneapolis, Minnesota 55402-2100
Telephone: (612) 349-5741